

Figures

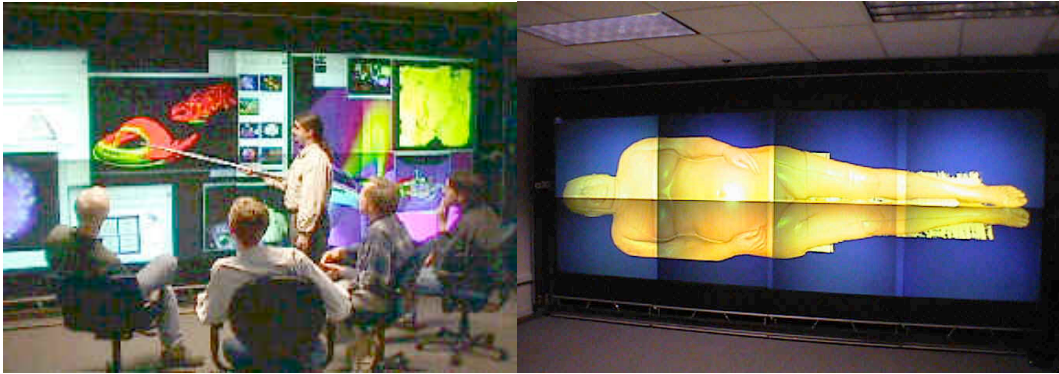


Fig. 1. The ANL Active Mural is a room-sized tiled display device composed of 4x2 rear-projected tiles. The Mural makes use of both an Onyx2 and a cluster of PC's to drive the displays as if they were a single high-resolution monitor. Alignment of projectors, color matching, and brightness uniformity necessary to create the appearance of a single display surface is extremely difficult. (image from ANL Future Technologies Group)

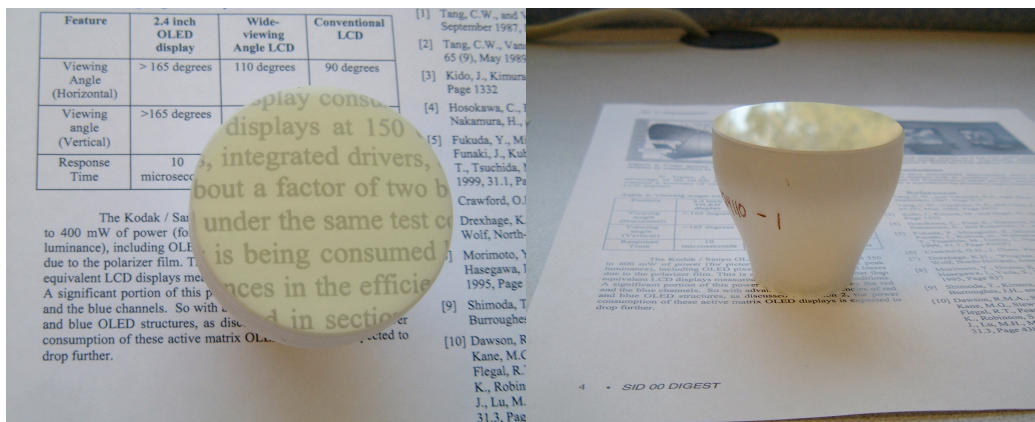


Fig. 2. This is an image of a fiber optic taper here at Berkeley Lab magnifying text through direct conduction of the image from the surface of the paper.

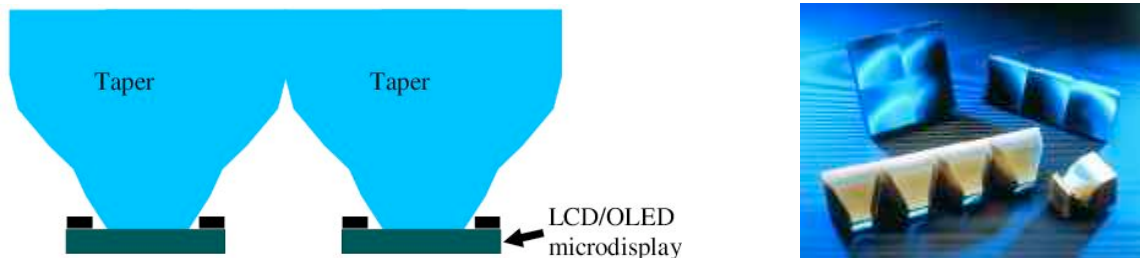


Fig. 3. The image on the left shows how the **Tile Module** is composed of a rectangular taper mated directly to the narrow end of the fiber optic taper (thereby hiding the electronics on the border of the LCD/OLED display units). Tile modules are then assembled into an NxM matrix to form a single large display surface of extremely high resolution. The image on the right shows the square taper-array products available from Schott Fiber Optics. The rectangular tapers can be assembled into a matrix of arbitrarily high size and resolution. (Image on right courtesy of Schott Fiber Optics)

Fig. 4. The Fiber Optic Tapers can be combined into a matrix of rectangular patches or a hexahedral mesh depending on the relative costs of the materials. If the taper is more costly per square inch than the display, then the hexahedral mesh offers the most cost effective use of taper surface area at the expense of the LCD display. Otherwise, if the LCD/OLED displays are more expensive per square inch than the tapers, then rectangular arrays of tapers are the most cost-effective solution.

